REMARKS

Reconsideration and withdrawal of the rejections of the claimed invention is respectfully requested in view of the amendments, remarks and enclosures herewith, which place the application in condition for allowance.

I. STATUS OF CLAIMS AND FORMAL MATTERS

Claims 1, 2 and 4-20 are pending in this application. No new matter has been added by this amendment. Claim 1 has been amended to improve clarity with respect to the "5 carbon" limitation. No new matter has been added.

It is submitted that the claims, herewith and as originally presented, are patentably distinct over the prior art cited in the Office Action, and that these claims were in full compliance with the requirements of 35 U.S.C. § 112. The amendments of the claims, as presented herein, are not made for purposes of patentability within the meaning of 35 U.S.C. §§§§ 101, 102, 103 or 112. Rather, these amendments and additions are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

II. CLAIM INTERPRETATION

The basis for this statement is not understood as claim 16 is dependent upon claim 7 which in turn is dependent upon claim 1. Claim 1 defines R^2 as being selected from the group consisting of R^3, R^4 and R^5 whereas claim 16 defines that R^2 must be R^3 (i.e., "R^2 is R^3").

III. THE 35 U.S.C. 112, 2nd PARAGRAPH REJECTION HAS BEEN OVERCOME

Claims 1-2 and 4-20 were rejected as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regards as the invention. The applicants request reconsideration of this rejection for the following reasons.

Claim 1

From the text of the rejection, it appears there is still some confusion with respect to the nature of the invention, i.e. "It is unclear that the 'aqueous defoamer emulsion' and the 'oil-in-water' emulsion can exist as distinct emulsions. The applicants had stated in their previous response that "...the 'at least one active defoaming substance' and the 'oil-in-water emulsion' of claim 1 are separate and distinct ***elements*** of the invention." (emphasis added - page 10, last two lines of "Background for the rejections" in previous response).

By way of analogy, a salt water solution comprises the elements of salt and water. Likewise, for the aqueous defoamer emulsion of the applicants' claimed invention, the elements

of the invention are the at least one active defoaming substance (A) and an oil-in-water emulsion (B). Whether the elements remain individually as emulsions is of no moment so long as the final product resulting from the combination of (A) and (B) is an aqueous defoamer emulsion.

With regard to being able to distinguish between (A) and (B), a detailed description of the oil-in-water emulsion is given for (B) and one of ordinary skill in the art would be able to determine whether (A) was the exact same composition as described in (B).

The limitation for R^3 has been moved to more clearly indicate this is not part of the optional language.

With regard to the scope of the phrase "at least one active defoaming substance", one of ordinary skill in the art would know the meaning of the term foam and likewise whether a substance acts as a defoamer or not. This particular rejection appears to be based on breadth, but "Breadth of a claim is not to be equated with indefiniteness" *In re Miller*, 441 F.2d 689, 169 USPQ 597 (CCPA 1971)) (cited in MPEP 2173.04).

To clarify the point about defoamer 3, the examples of the present application show that a commercial available defoamer (defoamer 3) has no defoaming efficiency in cooling lubricant concentrates; see table page 10 of the specification – significant amounts of foam for all mentioned emulsions and defoamers alone were observed.

Claim 20

The variation in scope has been corrected.

III. THE 35 U.S.C. 102(b)/103(a) REJECTIONS HAS BEEN OVERCOME

Claims 1-2, 4-5, 7-15 and 17-19 were rejected as allegedly being anticipated by Dow Corning Toray Silicone Company, Ltd., EP 0 761 724 A2.

Claims 1-20 (presumably 1, 2 and 4-20) were rejected as allegedly being anticipated by or in the alternative Schulz, Jr. et al, US 5,811,487.

Claims 11, 12 and 20 were rejected as allegedly being obvious by Dow Corning Toray Silicone Company, Ltd., EP 0 761 724 A2. The applicants request reconsideration of this rejection for the following reasons.

Claims 1-20 (presumably 1, 2 and 4-20) were rejected as allegedly being obvious by Schulz, Jr. et al, US 5,811,487, further in view of Ebbrecht et al, US 2004/0137804 (presumed to have intended to refer to US 2002/0137804). The applicants request reconsideration of this rejection for the following reasons.

(As paragraphs [0036] and [0065] from the corresponding U.S. Patent Application Publication were not considered during the previous Office Action, the applicants entire response is presented again with additional comments. With regard to the reference to paragraphs [0036] and [0065] in the previous response, paragraph [0036] corresponds to page 5, lines 16-18 and paragraph [0065] corresponds to page 10, lines 1-2 and the Table between lines 2 and 3 on page 10 of the specification.)

Background for the rejections

During the course of the telephonic interview, it appeared that the Dow Corning and Schluz rejections were based a broad interpretation of what could constitute a defoamer and what could constitute the oil-in-water emulsion, i.e. the Examiner presumed that the oil-in-water emulsion could also be the defoamer because of the presence of an organopolysiloxane. However, this position is incorrect.

While it may be possible for an organopolysiloxane ***alone*** to act as a defoamer, when the organopolysiloxane is part of an oil-in-water emulsion, the ***oil-in-water emulsion*** does not have any defoaming effect. As an illustration of this, the table on page 10, between lines 2 and 3 on page 10 of the specification shows that Emulsions 1, 2 and 3 which are encompassed within the scope of the invention, show no antifoaming activity when added to a cooling lubricant when compared against a cooling lubricant which had no defoamer added.

Therefore, the "at least one active defoaming substance" and the "oil-in-water emulsion" of claim 1 are separate and distinct elements of the invention.

(1) Claims 1-2, 4-5, 7-15 and 17-19 are not anticipated by Dow Corning

The applicants agree with the Examiner's contention that organopolysiloxanes alone could act as defoamers. However, the applicants disagree that Dow Corning establishes by inherency that an aqueous defoamer emulsion comprising:

A) at least one active defoaming substance and, optionally, at least one auxiliary or additive,

B) an oil-in-water emulsion consisting of at least one organopolysiloxane compound having a viscosity of ≥ about $1 \cdot 10^6$ mPas and water would have unexpectedly improved defoaming effect. There is no evidence which would lead one of ordinary skill in the art to accept that this is an inherent property which follows from a teaching of an organopolysiloxane emulsion.[1]

First, the applicants have shown in their own specification that organopolysiloxane containing oil-in-water emulsion do not have any defoaming effect which would be consistent with the state of the art taught within Dow Corning, i.e., the broad description of uses of organopolysiloxane emulsions (see col. 1, lines 8-11 of Dow Corning) is conspicuous by the absence of defoaming activity.

Second, while the applicants' oil-in-water emulsion component (B), consists only of at least one organopolysiloxane compound having a viscosity of ≥ about $1 \cdot 10^6$ mPas and water, the emulsions of Dow Corning consists of at least three components, i.e. an organopolysiloxane fluid or gum, an emulsifying agent and water.

Third, Dow Corning does not show any combination of the polysiloxane with a further component like a defoamer. Example 2 discloses a composition consisting of water, polydimethyl siloxane and iso-paraffin forming a stable emulsion – a use as defoaming agent is not disclosed or referred to.

(2) Claims 1-20 are not anticipated or in the alternative rendered obvious by Schultz

The reasoning above against anticipation and obviousness set forth above against Dow Corning is also applicable here. In fact, Schulz is even further removed from Dow Corning as there are other differences between their invention and the applicants' claimed invention.

First, Schulz discloses siloxane elastomers which are made by crosslinking reactions of Si—H containing siloxanes and an unsaturated hydrocarbon such as an alpha, omega-diene, in the presence of a low molecular weight siloxane fluid. The siloxane is first partially reacted with a mono-alkenyl functionalized polyether. It is then crosslinked by the alpha, omega-diene, in the presence of the low molecular weight siloxane fluid.

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[1] MPEP 2112, sec. IV (Requirements of Rejection Based on Inherency; Burden of Proof) states "*The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).....To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. *Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.*'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999)(citations omitted)

These siloxanes are different from the siloxanes used in the applicants oil-in-water emulsion.

Second, Schulz discloses siloxane elastomers which can be swollen with low molecular weight siloxane fluid or other organic fluids under shear force, to provide a uniform ***silicone paste*** having a viscosity of $> 1x\ 10^6$ mPas, i.e. the paste has the high viscosity, ***not the siloxanes*** alone as in our invention. For the siloxanes alone, no viscosity has been disclosed. In addition, Schulz does not disclose any particle sizes.

Third, the reliance on inherency to account for missing elements of the anticipation rejection or the Examiner's opinion, instead of evidence from within the prior art, to provide motivation for addressing the differences between Schulz and the applicants' invention is also unfounded because no nexus has been established between Schulz' teachings of a thickening silicones and how they would related to modifying an invention directed toward providing defoaming effects. Schultz refers only polyetherpolysiloxanes.

The present application refers primarly to ***alkyl***polysiloxanes. Furthermore, when considering the reference as a whole, Schultz directs the skilled artisan to the thickening of silicones and not toward any defoaming activity if the composition disclosed is combined with other ingredients.

As such, all of the elements of the applicants' claimed invention are not taught (anticipation) nor are all of the limitations taught or suggested by the prior art either from within the Schultz reference or from information available to those of ordinary skill in the art (obviousness).

(3) Claims 11, 12 and 20 are not rendered obvious by Dow Corning

The arguments presented against anticipation should also be considered repeated here. To the extent that it would have been obvious to one of ordinary skill in the art to add a defoamer to an organopolysiloxane containing oil-in-water emulsion which has no defoaming activity by itself (whether taught by Dow Corning itself or in combination with another reference), the applicants note that the specification has provided evidence of unexpectedly superior results.

The table between lines 2 and 3 on page 10 of the specification of the specification shows that the defoaming effect of Defoamers 1, 2 and 3 were greatly improved when an

organopolysiloxane containing oil-in-water emulsion was added to the Defoamer. Not only was the degree of improvement in defoaming effect surprising, it was surprising that there was ANY effect at all as the organopolysiloxane containing oil-in-water emulsion was shown not to have any defoaming properties.

(4) Claims 1-20 are not rendered obvious by Schulz in view of Ebbrecht

As Ebbrecht was relied up primarily to show use of organosiloxanes in cooling lubricants, the combination of Schulz and Ebbrecht does not address the differences between the applicants' invention as claimed and Schulz or account for the applicants' showing of unexpected results.

CONCLUSION

In view of the remarks and amendments herewith, the application is believed to be in condition for allowance. Favorable reconsideration of the application and prompt issuance of a Notice of Allowance are earnestly solicited. The undersigned looks forward to hearing favorably from the Examiner at an early date, and, the Examiner is invited to telephonically contact the undersigned to advance prosecution. The Commission is authorized to charge any fee occasioned by this paper, or credit any overpayment of such fees, to Deposit Account No. 50-0320.

Respectfully submitted,
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